**Stat & Data Analysis: End of 3.2 notes**

Remember, Z-scores are N(0, 1)

1. I have an observation that has a Z-score of -1.7. What percent of the data is below it?
2. I have an observation that has a Z-score of 2.8. What percent of the data is above it?
3. What Z-score has 10% of the data below it?
4. What Z-score has 20% of the data above it?
5. I have a distribution that is N(150, 12).
6. What percent of the data is below 135?
7. What is the Z score for 135?
8. What percent of the data is below the Z-score you found in letter (b)?

Remember, Z scores are N(0,1).

1. What do you notice about your answers to (b) and (c)?
2. I have a NEW distribution that is Normal. The observation of 30 has 20% of the data below it.
3. I want to find the Z-score for the observation of 30. What percent of the data would be below the Z-score for 30?
4. Find the Z-score for the observation of 30.
5. We know that the mean of the distribution is 50, but we don't know the std. deviation. Use the Z-score formula for the observation of 30, and your answer in (b) to find the std. dev.
6. I have a distribution that has a mean of 210 and 15% of the data is below the point 180. What is the std. deviation?
7. I have a distribution that has a std. deviation of 3 and 22% of the data is below the point 25. What is the mean? (Find the Z-score or the point 25, then work backwards using the Z-score formula)
8. I have a distribution that has a mean of 35 and 18% of the data is above the point 48. What is the std. deviation? (Find the Z-score or the point 48, then work backwards using the Z-score formula)